

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>A 7724 / KK</b>	<b>FOR FURTHER ACTION</b> see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. <b>PCT/EP2005/000038</b>	International filing date (day/month/year) <b>05/01/2005</b>	(Earliest) Priority Date (day/month/year) <b>05/01/2004</b>
Applicant  <b>AIRBUS DEUTSCHLAND GMBH</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

### 1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☒ **Unity of invention is lacking** (see Box III).

### 4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

### 5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

### 6. With regard to the drawings,

a. the figure of the **drawings** to be published with the abstract is Figure No. 2

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

**Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1,5,6,7,8,13,14,15

Aircraft fuselage outer skin made of burn-through resistant, either metallic or non-metallic material.  
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2. claims: 2,3,4,5,6,7,9,10,11,12,13,14,15,16

Aircraft fuselage outer skin made of a hybrid compound, the compound combining a metallic and a non-metallic material.  
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A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 B64C1/40 B64C1/00 A62C3/08

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B64C A62C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	GB 919 839 A (BRONZAVIA) 27 February 1963 (1963-02-27) page 1, lines 10-14, 30-34, 43-47, 52-64 page 2, lines 85-98; figures	1, 8
X	EP 0 475 677 A (BRITISH AEROSPACE PUBLIC LIMITED COMPANY) 18 March 1992 (1992-03-18) column 3, lines 35-42; figures	1, 8
X	US 5 154 373 A (SCOTT ET AL) 13 October 1992 (1992-10-13) column 1, line 49 - column 2, line 21 column 2, line 51 - column 3, line 18 column 3, line 48 - column 4, line 31; figures	1, 5-7, 13, 14
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*G\* document member of the same patent family

Date of the actual completion of the international search

29 July 2005

Date of mailing of the international search report

12.09.2005

Name and mailing address of the ISA

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/017590 A1 (FAY RALPH MICHAEL ET AL) 14 February 2002 (2002-02-14) the whole document -----	1,5-8, 13-15
A	EP 1 164 006 A (JOHNS MANVILLE INTERNATIONAL INC) 19 December 2001 (2001-12-19) -----	
A	DE 44 17 889 A1 (BURKHART GROB LUFT- UND RAUMFAHRT GMBH & CO. KG, 86874 TUSSENHAUSEN, D) 23 November 1995 (1995-11-23) column 1, lines 3-12; figures -----	1
X	US 6 286 785 B1 (KITCHEN NICHOLAS DONALD) 11 September 2001 (2001-09-11) column 1, lines 20-35 column 1, line 66 - column 2, line 8 column 2, lines 24-42 column 5, line 43 - column 6, line 21 column 7, lines 19-25 column 11, lines 39-42; figures -----	2,4,10, 16
X	US 6 114 050 A (WESTRE ET AL) 5 September 2000 (2000-09-05) column 1, lines 11-16 column 2, lines 31-44 column 3, lines 51-61 column 5, lines 1,2 column 6, lines 19-37 column 10, lines 35-59 column 13, lines 45-52; figures -----	2-4,9, 10,16
X	DE 202 20 600 U1 (EUROCOPTER DEUTSCHLAND GMBH) 24 December 2003 (2003-12-24) paragraphs '0016!', '0019!', '0021!' - '0023!', '0027!', '0030!' - '0038!', '0053!', '0054!; figures -----	2-4,9, 10,16
A	US 2 945 653 A (ATKIN EDGAR H) 19 July 1960 (1960-07-19) column 1, lines 15-29 column 2, lines 18-28,47-61 column 3, lines 23-45,64-74 column 4, lines 6-11; figures -----	1-16
A	US 4 310 132 A (FROSCH ET AL) 12 January 1982 (1982-01-12) column 2, lines 31-37 -----	11
A	US 5 051 300 A (ROUSSEAU ET AL) 24 September 1991 (1991-09-24) abstract -----	11
5 A	US 2003/080251 A1 (ANAST PETER Z) 1 May 2003 (2003-05-01) -----	
6		

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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			EP 0783960 A2	16-07-1997
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			DE 68911443 T2	09-06-1994
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US 2003080251	A1	01-05-2003	NONE	

## Box No. IV Text of the abstract (Continuation of item 5 of the first sheet)

The fuselage is conceived in such a way as to prevent the spread of flames produced by a source of fire and acting on the fuselage from outside the aircraft environment. The fuselage concept takes into account materials or material combinations that will scarcely allow protection of the cabin area of an aircraft (upon emergency landing) to be violated by flames spreading from outside the aircraft environment, which may facilitate an evacuation of passengers from the aircraft.

An aircraft fuselage, whose fuselage structure, in addition to other structural elements that are components of the mechanical strength bracing of the fuselage and help absorb its forces, encompasses an exterior skin (2) consisting of various respective materials, which are designed to be resistant to shear, and incorporated as a bearing element into the mechanical strength bracing (6,7,8) to absorb and transfer the forces and torques acting thereupon. The exterior skin (2) is fabricated from a burn-through resistant semi-finished material consisting of a non-metallic material or a fireproof metallic material, wherein the semi-finished material can be molded through further processing.

Also, the exterior skin may be realized by a semi-finished material combining a non-metallic material and a metallic material, wherein the produced exterior skin product is a hybrid material that can be molded and joined through further processing.